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Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile

Tyr Gly Ala Ser Thr Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Asn Ser Leu Gln Ser

Glu	Asp	Phe	Ala	Leu	Tyr	Tyr	Cys	His	Glu	Tyr	Asn	Gly	Trp	Pro	Pro
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2

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The Sequence Listing file must end at the bottom of the last SEQ ID #.  
There can be no extra information following the last SEQ ID # in the  
file. Please remove the extra information, "2" and "1", found at the end  
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Application No: 09700851

Version No: 3.0

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Output Set:

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Actual SeqID Count: 10

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# SEQUENCE LISTING

<110> Matsumoto, Yoh-Ichi  
Kimura, Tsuyoshi  
Imaizumi, Atsuchi  
Takedo, Tae  
Co, May Sung  
Vasquez, Maximiliano  
TEIJIN LIMITED

<120> HUMANIZED ANTIBODIES THAT RECOGNIZE VEROTOXIN II AND  
CELL LINE PRODUCING SAME

<130> 019026-000110US

<140> 09700851

<141> 2003-11-03

<150> WO 99/59629

<151> 1999-05-19

<150> US 60/086,570

<151> 1998-05-20

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<170> PatentIn Ver. 2.1

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<223> Figure 1(A): Heavy chain variable region of mouse  
antibody VTml.1 (MuVTml.1).

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atg aac ttt gtg ctc agc tcg att ttc ctt gcc ctc att tta aaa gga	48
Met Asn Phe Val Leu Ser Ser Ile Phe Leu Ala Leu Ile Leu Lys Gly	
1 5 10 15	

gtc cag tgt gaa gtg cag ctg gtg gag tcg ggg gga ggc tta gtg aag	96
Val Gln Cys Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys	
20 25 30	

ect gga ggg ccc ctg aaa ctc tcc tgt gca gcc tct gga ttc act ttc	144
Pro Gly Gly Pro Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe	
35 40 45	

agt agt tat ggc atg tct tgg gtt cgc cag act ccg gag aag agg ctg	192
Ser Ser Tyr Gly Met Ser Trp Val Arg Gln Thr Pro Glu Lys Arg Leu	

50 55 60

gag tgg gtc gca acc att agt act ggt ggt agt tac acc tac tac cca 240  
 Glu Trp Val Ala Thr Ile Ser Thr Gly Gly Ser Tyr Thr Tyr Tyr Pro  
 65 70 75 80

gac agt gtg aag ggt cga ttc acc atc tcc aga gac aat gcc aag aac 288  
 Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn  
 85 90 95

gcc ctg tat ctg caa atg agc agt ctg agg tct gag gac acg gcc ata 336  
 Ala Leu Tyr Leu Gln Met Ser Ser Leu Arg Ser Glu Asp Thr Ala Ile  
 100 105 110

tat tac tgt gca aga cgg ggg gac gca tgg ggt aac ttg gac tac tgg 384  
 Tyr Tyr Cys Ala Arg Arg Gly Asp Ala Trp Gly Asn Leu Asp Tyr Trp  
 115 120 125

ggt caa gga acc tct gtc acc gtc tcc tca 414  
 Gly Gln Gly Thr Ser Val Thr Val Ser Ser  
 130 135

<210> 2  
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 <212> PRT  
 <213> Mus musculus

<220>  
 <223> Figure 1(A): Heavy chain variable region of mouse  
 antibody VTml.1 (MuVTml.1).

<400> 2  
 Met Asn Phe Val Leu Ser Ser Ile Phe Leu Ala Leu Ile Leu Lys Gly  
 1 5 10 15  
 Val Gln Cys Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys  
 20 25 30  
 Pro Gly Gly Pro Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe  
 35 40 45  
 Ser Ser Tyr Gly Met Ser Trp Val Arg Gln Thr Pro Glu Lys Arg Leu  
 50 55 60  
 Glu Trp Val Ala Thr Ile Ser Thr Gly Gly Ser Tyr Thr Tyr Tyr Pro  
 65 70 75 80  
 Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn  
 85 90 95  
 Ala Leu Tyr Leu Gln Met Ser Ser Leu Arg Ser Glu Asp Thr Ala Ile  
 100 105 110  
 Tyr Tyr Cys Ala Arg Arg Gly Asp Ala Trp Gly Asn Leu Asp Tyr Trp  
 115 120 125

Gly Gln Gly Thr Ser Val Thr Val Ser Ser  
130 135

<210> 3  
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<213> Mus musculus

<220>  
<221> CDS  
<222> (1)..(381)

<223> Figure 1(B): Light chain variable region of mouse  
VTml.1 antibody (MuVTml.1).

<400> 3  
atg gtt ttc aca cct cag ata ctt gga ctt atg ctt ttt tgg att tca 48  
Met Val Phe Thr Pro Gln Ile Leu Gly Leu Met Leu Phe Trp Ile Ser  
1 5 10 15  
gcc tcc aga ggt gat gtt gtg cta act cag tct cca gcc acc ctg tct 96  
Ala Ser Arg Gly Asp Val Val Leu Thr Gln Ser Pro Ala Thr Leu Ser  
20 25 30  
gtg act cca gga gat agc gtc agt ctt tcc tgc agg gcc agt caa act 144  
Val Thr Pro Gly Asp Ser Val Ser Leu Ser Cys Arg Ala Ser Gln Thr  
35 40 45  
att agc aac aac cta cac tgg tat caa cac aaa tca cat gag tct cca 192  
Ile Ser Asn Asn Leu His Trp Tyr Gln His Lys Ser His Glu Ser Pro  
50 55 60  
agg ctt ctc atc aag tct gct tcc cag tcc atc tct ggg atc ccc tcc 240  
Arg Leu Leu Ile Lys Ser Ala Ser Gln Ser Ile Ser Gly Ile Pro Ser  
65 70 75 80  
agg ttc agt ggc agt gga tca ggg aca gat ttc act ctc agt atc aac 288  
Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Ser Ile Asn  
85 90 95  
agt gtg gaa act gaa gat ttt gga atg tat ttc tgt caa cag agt tac 336  
Ser Val Glu Thr Glu Asp Phe Gly Met Tyr Phe Cys Gln Gln Ser Tyr  
100 105 110  
agc tgg ccg ctc acg ttc ggt gct ggg acc aag ctg gag ctg aaa 381  
Ser Trp Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys  
115 120 125

<210> 4  
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<212> PRT  
<213> Mus musculus

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<223> Figure 1(B): Light chain variable region of mouse  
VTml.1 antibody (MuVTml.1).

<400> 4

Met Val Phe Thr Pro Gln Ile Leu Gly Leu Met Leu Phe Trp Ile Ser  
1 5 10 15

Ala Ser Arg Gly Asp Val Val Leu Thr Gln Ser Pro Ala Thr Leu Ser  
20 25 30

Val Thr Pro Gly Asp Ser Val Ser Leu Ser Cys Arg Ala Ser Gln Thr  
35 40 45

Ile Ser Asn Asn Leu His Trp Tyr Gln His Lys Ser His Glu Ser Pro  
50 55 60

Arg Leu Leu Ile Lys Ser Ala Ser Gln Ser Ile Ser Gly Ile Pro Ser  
65 70 75 80

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Ser Ile Asn  
85 90 95

Ser Val Glu Thr Glu Asp Phe Gly Met Tyr Phe Cys Gln Gln Ser Tyr  
100 105 110

Ser Trp Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys  
115 120 125

<210> 5

<211> 414

<212> DNA

<213> Mus musculus

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<221> CDS

<222> (1)..(414)

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<223> Figure 2(A): Heavy chain variable region of  
humanized VTml.1 antibody (HuVTml.1).

<400> 5

atg aac ttt gtg ctc agc tcg att ttc ctt gcc ctc att tta aaa gga 48  
Met Asn Phe Val Leu Ser Ser Ile Phe Leu Ala Leu Ile Leu Lys Gly  
1 5 10 15

gtc cag tgt gaa gtg caa ctg gtg gag tcg ggg gga gcc tta gtg cag 96  
Val Gln Cys Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln  
20 25 30

cct gga ggg tcc ctg aga ctc tcc tgt gca gcc tct gga ttc act ttc 144  
Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe  
35 40 45

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agt agt tat ggc atg tct tgg gtt cgc cag gct ccg ggt aag ggt ctg 192
Ser Ser Tyr Gly Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
50 55 60

gag tgg gtc gca acc att agt act ggt ggt agt tac acc tac tac cca 240
Glu Trp Val Ala Thr Ile Ser Thr Gly Gly Ser Tyr Thr Tyr Tyr Pro
65 70 75 80

gac agt gtg aag ggt cga ttc acc atc tcc aga gac aat tcc aag aac 288
Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
85 90 95

acc ctg tat ctg caa atg aac agt ctg agg gct gag gac acg gcc gta 336
Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val
100 105 110

tat tac tgt gca aga cgg ggg gac gca tgg ggt aac ttg gac tac tgg 384
Tyr Tyr Cys Ala Arg Arg Gly Asp Ala Trp Gly Asn Leu Asp Tyr Trp
115 120 125

ggt caa gga acc tta gtc acc gtc tcc tca 414
Gly Gln Gly Thr Leu Val Thr Val Ser Ser
130 135

<210> 6
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<213> Mus musculus

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<223> Figure 2(A): Heavy chain variable region of
humanized VTml.1 antibody (HuVTml.1).

<400> 6
Met Asn Phe Val Leu Ser Ser Ile Phe Leu Ala Leu Ile Leu Lys Gly
1 5 10 15

Val Gln Cys Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln
20 25 30

Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe
35 40 45

Ser Ser Tyr Gly Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
50 55 60

Glu Trp Val Ala Thr Ile Ser Thr Gly Gly Ser Tyr Thr Tyr Tyr Pro
65 70 75 80

Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
85 90 95

Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val
100 105 110

Tyr Tyr Cys Ala Arg Arg Gly Asp Ala Trp Gly Asn Leu Asp Tyr Trp

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Gly Gln Gly Thr Leu Val Thr Val Ser Ser  
130 135

<210> 7

<211> 381

<212> DNA

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<220>

<221> CDS

<222> (1)..(381)

<220>

<223> igure 2(B): Light chain variable region of  
humanized VTml.1 antibody (HuVTml.1) .

<400> 7

atg gtt ttc aca cct cag ata ctt gga ctt atg ctt ttt tgg att tca 48  
Met Val Phe Thr Pro Gln Ile Leu Gly Leu Met Leu Phe Trp Ile Ser  
1 5 10 15

gcc tcc aga ggt gaa att gtg cta act cag tct cca gcc acc ctg tct 96  
Ala Ser Arg Gly Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser  
20 25 30

gtg tct cca gga gaa aga gcc act ctt tcc tgc agg gcc agt caa act 144  
Val Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Thr  
35 40 45

att agc aac aac cta cac tgg tat caa caa aaa cca ggt cag gct cca 192  
Ile Ser Asn Asn Leu His Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro  
50 55 60

agg ctt ctc atc aag tct gct tcc cag tcc atc tct ggg ata ccc gcc 240  
Arg Leu Leu Ile Lys Ser Ala Ser Gln Ser Ile Ser Gly Ile Pro Ala  
65 70 75 80

agg ttc agt ggc agt gga tca ggg aca gat ttc act ctc act atc agc 288  
Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser  
85 90 95

agt ctg gaa tct gaa gat ttt gca gtg tat tac tgt caa cag agt tac 336  
Ser Leu Glu Ser Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Ser Tyr  
100 105 110

agt tgg ccg ctc acg ttc ggt caa ggg acc aag gtg gag atc aaa 381  
Ser Trp Pro Leu Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys  
115 120 125

<210> 8

<211> 127

<212> PRT

<213> Mus musculus

<220>

<223> Figure 2(B): Light chain variable region of  
humanized VTml.1 antibody (HuVTml.1) .

<400> 8

Met Val Phe Thr Pro Gln Ile Leu Gly Leu Met Leu Phe Trp Ile Ser  
1 5 10 15

Ala Ser Arg Gly Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser  
20 25 30

Val Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Thr  
35 40 45

Ile Ser Asn Asn Leu His Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro  
50 55 60

Arg Leu Leu Ile Lys Ser Ala Ser Gln Ser Ile Ser Gly Ile Pro Ala  
65 70 75 80

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser  
85 90 95

Ser Leu Glu Ser Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Ser Tyr  
100 105 110

Ser Trp Pro Leu Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys  
115 120 125

<210> 9

<211> 123

<212> PRT

<213> Homo sapiens

<220>

<223> heavy chain variable region of the GF4/1.1 antibody

<400> 9

Glu Val Gln Val Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly  
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Lys Tyr  
20 25 30

Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
35 40 45

Ser Gly Ile Ser Ala Ser Gly Glu Asn Thr Tyr Tyr Ala Asp Pro Val  
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Val Tyr  
65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Asp Asp Thr Ala Met Tyr Tyr Cys  
85 90 95

Ala Lys Gly Gly Arg Gln Trp Val Val Leu Gly Tyr Phe Asp Ser  
100 105 110

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser  
115 120

<210> 10  
 <211> 110  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <223> light chain variable region of the GF4/1.1 antibody

<400> 10  
 Glu Ile Leu Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly  
 1 5 10 15  
 Glu Arg Val Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Asn  
 20 25 30  
 Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile  
 35 40 45  
 Tyr Gly Ala Ser Thr Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly  
 50 55 60  
 Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Asn Ser Leu Gln Ser  
 65 70 75 80  
 Glu Asp Phe Ala Leu Tyr Tyr Cys His Glu Tyr Asn Gly Trp Pro Pro  
 85 90 95  
 Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr  
 100 105 110

2

1